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Atty. Docket No. 2003-0056-01
USSN 10/608,521

APR 18 2007

IN THE CLAIMS:

1. (Currently Amended) A method for stabilizing spectral shift in a multi-layered dielectric reflectivity coating located on a substrate for reflecting electromagnetic radiation after formation of the dielectric reflectivity coating on the substrate subject to compaction/densification upon exposure to DUV or shorter wavelength light, comprising:

~~applying the reflectivity coating to a substrate surface forming a coating bulk on the surface;~~

exposing the ~~coating bulk~~ multi-layered dielectric reflectivity coating to a pretreatment of a sufficient amount of deep ultraviolet (DUV) laser radiation that is less than or equal to 300 nanometers in wavelength to induce sufficient compaction or densification by removal of water vapor in enough of the ~~coating bulk~~ multi-layered dielectric reflectivity coating to inhibit subsequent compaction or densification during continued exposure to DUV or shorter wavelength radiation.

2. (Currently Amended) The method of claim 1 further comprising:
the pretreatment laser radiation exposure amounts to energy of at least the equivalent of about 2[[Bp]] billion pulses of DUV radiation from a laser at 9[[mJ]] millijoules per pulse.

3. (Currently Amended) The method of claim 2 further comprising:
the pretreatment laser radiation exposure amounts to the energy being delivered [[in]] at about a 3KHz pulse repetition rate.

4. (Currently Amended) The method of claim 1 further comprising:
the pretreatment laser radiation exposure amounts to energy of at least the equivalent of 15-18 [[mJ]] millijoules per pulse of laser radiation delivered over about 700 [[M]] million pulses to 1[[B]] billion pulses.

5. (Currently Amended) The method of claim 1 further comprising:
~~the coating bulk forms a plurality of layers; and,~~
determining the amount of DUV laser radiation from based upon a specified reduction in

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hygroscopicity of one or more ~~of the layers of the multi-layered dielectric reflectivity coating,~~
wherein a least one of the layers is hygroscopic.

6. (Currently Amended) The method of claim 1 further comprising:
~~the coating bulk forms a plurality of layers; and,~~
determining the amount of DUV laser radiation based upon a specified reduction in
compaction of one or more ~~of the layers of the multi-layered dielectric reflectivity coating.~~

7. (Currently Amended) The method of claim 1 further comprising:
~~the coating bulk forms a plurality of layers; and,~~
determining the amount of DUV laser radiation based upon a specified reduction in
hygroscopicity and compaction ~~of one or more of the layers of the multi-layered dielectric~~
reflectivity coating, wherein a least one of the layers is hygroscopic.